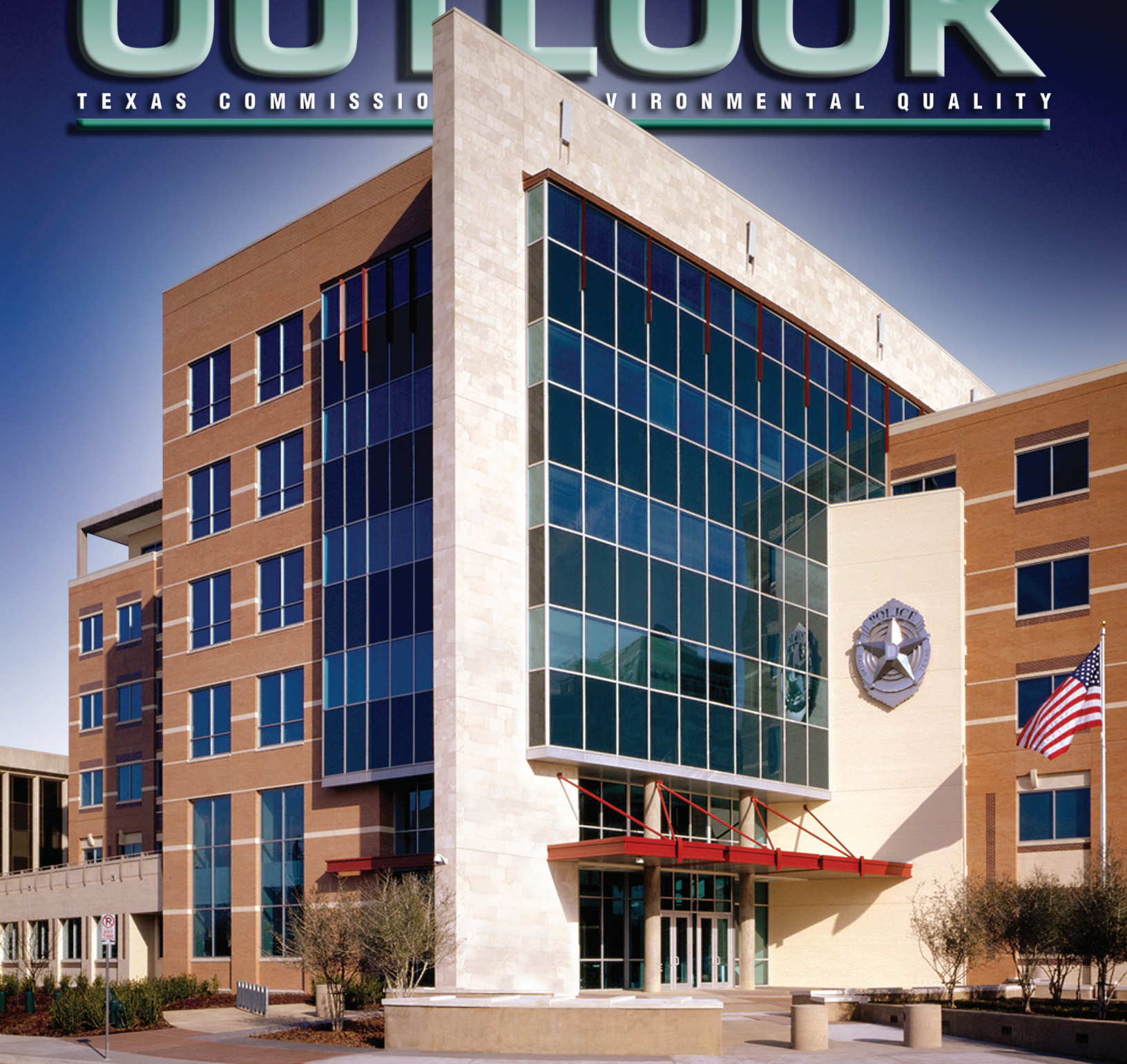
FALL 2007

Natural OUTLOOK

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



A New Generation of Buildings

Green Building Practices are on the Rise

Natural Outlook is published quarterly by the Agency Communications Division at the Texas Commission on Environmental Quality

Visit the TCEQ web site:
www.tceq.state.tx.us

For a free subscription, write to:
Natural Outlook, MC 118
TCEQ
P.O. Box 13087
Austin, TX 78711-3087

Or phone 512-239-0010;
e-mail ac@tceq.state.tx.us;
or fax 512-239-5010.

Instead of receiving this newsletter in the mail, readers can get an e-mail alert when *Natural Outlook* is available to view on the TCEQ web site. To sign up for that option, visit **www.tceq.state.tx.us/goto/outlook**.

The page also includes information on renewing subscriptions to the newsletter.

printed on recycled paper using soy-based ink

Natural OUTLOOK

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Exploring environmental issues and challenges in Texas

New Laws Await Implementation 1
With almost 200 new state laws affecting the agency, the TCEQ sets to work to implement the legislation, including expanded incentives for trimming emissions from vehicles and heavy equipment.

Taking Pride in the Neighborhood 5
Cleanup efforts in El Paso include a free lending program for lawn and garden implements.

from the cover

Blueprint for Sustainability 6
Green building trends are taking hold in Texas, with municipalities, hospitals, and universities helping to lead the way. The choice of efficient design and reduced demands on natural resources can produce long-term savings.

Leading Examples of Green Buildings 8
These projects are among a growing inventory of structures that have embraced the principles of conservation.

Expedited-Enforcement Effort Grows 11
A year after the TCEQ began issuing field citations for some environmental infractions, the program is expanded.

Pollution Control Strategies to Expand 12
Commissioners approve more comprehensive measures to improve air quality in the Houston and Dallas-Fort Worth areas.

on the back

Hunting for Heroes
Applications are coming due for the 2008 Texas Environmental Excellence Awards.

Training Assistance Available
Federal grant funds will pay for operator training at small public water systems.

COVER: The Dallas police headquarters was a trailblazer when it opened in 2003. Every step in planning and construction closely followed the green-building principles of sustainability, earning the project widespread acclaim and a silver LEED rating. Photo courtesy of PSA-Dewberry; Mark Trew, photographer.

New Laws Await Implementation

Two air quality programs are due for major expansions

By the end of the regular session in May, the Legislature had passed 196 bills that will have some impact on TCEQ programs and staff. Many of the measures will require the agency to issue new rules, revise policies, and/or create guidance materials.

The agency will receive more than $1 billion in appropriations for the 2008-2009 biennium. The majority of new money targets two incentive-based programs designed to lower mobile-source emissions.

The TCEQ will no longer manage the National Flood Insurance Program, which was transferred to another agency. But it gained personnel to work on the expanded emission-reduction programs and to staff a newly formed division assigned to radioactive materials.

Implementation of new laws has begun in TCEQ programs dealing with air and water quality and waste management. Some highlights follow.

Air

Senate Bill 12 ■ House Bill 160
Emission reductions

With significant funding increases, two of the state's leading air quality programs will expand to achieve broader reductions in harmful emissions.

Under the AirCheck Texas Repair and Replacement Assistance Program, the TCEQ offers incentives to repair or replace older, polluting cars and trucks. The Texas Emissions Reduction Plan (TERP) issues grants to reduce nitrogen oxide (NO_x) emissions from high-emitting diesel sources, such as construction equipment and 18-wheelers, in areas of the state identified as in nonattainment or near-nonattainment of federal ozone standards. Grants are used for new purchases, replacements, retrofit technologies, and qualifying fuels.

The Legislature, facing federal deadlines for improved air quality in several urban areas, boosted funding for both programs. (See article on pollution control strategies, page 12).

Recognizing that vehicle exhaust contributes to the formation of ground-level ozone, Texas has instituted annual tailpipe testing in 17 urban counties. Vehicles that fail must be repaired or replaced. To assist motorists through AirCheck Texas (also known as LIRAP), the state has been offering up to $600 to repair or retrofit a vehicle. This level of assistance stays the same.

Help with replacing a vehicle ranged from $600 to $1,000, available to vehicle owners with a household net income at or below 200 percent of the federal poverty level.

Now, income eligibility bumps up to 300 percent of the poverty level ($61,950 for a family of four). The TCEQ estimates that 1.9 million households in the participating 16 counties could be eligible for this assistance.

SB 12 also addresses the existing requirement that at least 75 percent of the annual mileage of a TERP-funded diesel truck occur within the 42 counties eligible for grants. The Commission is now authorized to designate highways and

Incentives for Cleaner Cars and Trucks

For replacement vehicles, the new level of state reimbursement depends on the vehicle type and model year.

REPLACEMENT VEHICLE	MAXIMUM ALLOWED
A car of the current model year or the previous three model years	$3,000
A truck of the current model year or the previous two model years	3,000
A hybrid vehicle of the current model year or the previous model year	3,500

Note: Vehicles that are at least 10 years old are eligible for retirement if the owner meets income eligibility requirements. The replacement vehicle must weigh less than 10,000 pounds, be certified to meet cleaner emission standards, and cost no more than $25,000.

roadways—in other counties—on which vehicle travel can be counted toward this requirement.

HB 160 provides for additional projects to become eligible for TERP funding. These include initiatives designed to reduce emissions at major rail intersections through rail relocation and congestion mitigation activities.

The TERP funding includes $7.5 million in grants for the Clean School Bus Program to help school districts throughout the state update aging bus fleets and install systems to lower emissions of particulate matter and other pollutants.

Another $10 million was designated for local initiatives to reduce emissions in the 16 counties participating in the vehicle repair and replacement assistance program.

Under the TERP, the New Technology Research and Development (NTRD) program will continue to support clean technologies that have the potential to succeed in the marketplace. The TCEQ will have approval authority over grant contracts. Higher education institutions are now eligible to participate directly in NTRD grants.

From 2002 to mid-2007, the TERP issued $406.7 million in grants, which are projected to achieve NO_x reductions of an estimated 45.11 tons per day by 2009. Legislation extended the program to 2013.

Among other provisions in SB 12 are:

- A limit on the air quality violations the TCEQ can include in enforcement actions when the case is based on information from a person, corporation, or any legal entity.
- A requirement to notify municipal officials when the TCEQ receives an application for a concrete batch plant in their area.

Grant Levels Increase

PROGRAM	FY 2006-2007 (in millions)	FY 2008-2009 (in millions)
TERP *Primary revenue source:* the vehicle title transfer fee and a 2% fee on sales and lease of diesel equipment	$257	$338*
AirCheck Texas assistance *Primary revenue source:* a portion of the fee assessed for emissions testing in 16 urban counties	$11	$90

* Funding includes $4.5 million for administration and $36.2 million for the New Technology Research and Development program.

Water

SB 3 ■ HB 3 and 4
Water package

Passage of omnibus water bills ushers in a new approach to regulating surface water consumption while meeting environmental flow needs of the state's rivers, estuaries, and bays. It also advances the state's goals for water planning and conservation.

The TCEQ now has the job of adopting environmental flow standards, which will determine how much water must be allowed to remain flowing to keep rivers and bays productive. The agency, which regulates use of surface water by issuing permits, has long used a method based primarily on hydrology to estimate the environmental flows required to maintain a healthy ecosystem. But stakeholder groups will be assembled with the task of recommending specific standards that may incorporate a more comprehensive approach.

Prior to adopting the new standards, the TCEQ must hear from regional stakeholder groups, as well as scientific advisers. The commissioners will consider their analyses and recommendations, as well as competing water needs, in establishing the new standards. At that point, the handling of environmental reviews for water permitting will change from a case-by-case basis to an environmental standards-by-rule process.

Under expanded conservation measures, the TCEQ and the Texas Water Development Board (TWDB) will jointly adopt rules requiring the submission of water conservation plans from public utilities that provide service to 3,300 or more connections. These 280 utilities, the largest in the state, must also make annual progress reports to the TWDB, describing how they are implementing the conservation plans. Previously, water conservation plans were only required from utilities making water rights applications or receiving funding from the TWDB. The TCEQ

Agency Appropriations

The TCEQ will get a 7.5 percent bump in funding during the 2008-2009 biennium. The agency also recovered some of the general revenue (GR) lost in 2005 for its water programs.

The Legislature approved general revenue from dedicated funds at about $959 million for the next two-year funding cycle. Combined with federal funds and other funds, that brings the agency's overall appropriations to almost $1.08 billion for the biennium.

Appropriations for the 2006-2007 biennium, including contingency riders and salary increases, was $988.1 million. The new biennium began Sept. 1, 2007.

The spending picture for the next two years includes consecutive 2 percent salary increases for staff and a cap on the number of employees, or full-time equivalents, of 2,942 in fiscal 2008 and 2,935 in fiscal 2009.

The biennial appropriations include the following changes:

Emissions: The Texas Emissions Reduction Plan will get an infusion of $80.7 million, raising its total to $337.8 million. The AirCheck Texas Repair and Replacement Assistance Program, also known as LIRAP, will receive an additional $79 million, for a total of $90 million, to repair or retire aging cars and trucks. Another $7.5 million is slated for the Clean School Bus Program to help retrofit high-emitting school buses.

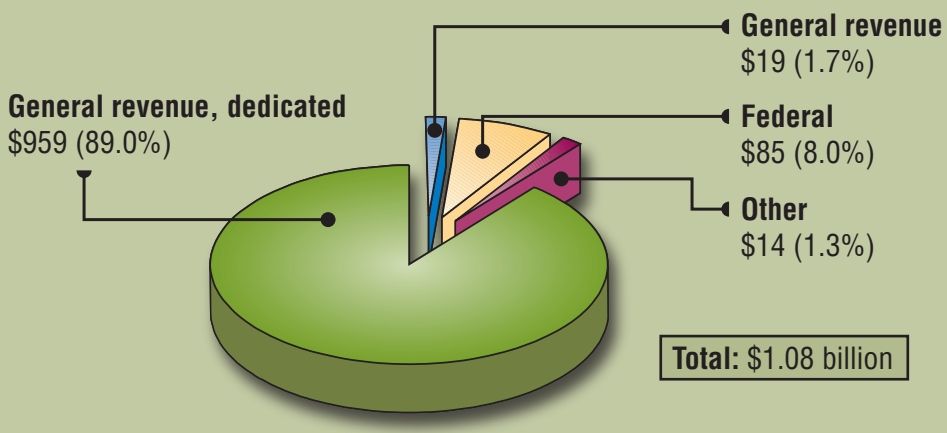
Air quality: About $10 million will be made available for local air initiative grants. These matching funds can be used on various air quality projects, such as development of air control strategies to comply with state and federal requirements.

Water quality: After agency water programs lost $40 million in general revenue two years ago, lawmakers restored almost $6.1 million, bringing the GR commitment to about $19 million.

Petroleum storage tanks: Sunset for the reimbursement portion of the remediation program was reset for 2012. With the program winding down, funding for cleanups was reduced to about $78 million.

TCEQ Financing for FY 2008-2009

(in millions)



will be authorized to initiate enforcement actions when utilities fail to comply with the new water conservation plan submission and annual reporting requirements.

To address long-term water planning, lawmakers designated the regional sites recommended in the state water plan as having unique value for construction of a dam or reservoir. The TWDB has recommended 19 new reservoirs to keep up with state growth and water demands.

The measure also raises the cap on how much water can be pumped out of the Edwards Aquifer in South Central Texas.

The TCEQ and others will assist the Edwards Aquifer Authority in developing recommendations for withdrawal rates to maintain target spring discharge levels to protect endangered species.

HB 3098
Edwards Aquifer

The TCEQ gets four new staff positions, or full-time equivalents (FTEs), to expedite the review of water quality protection plans affecting the Edwards Aquifer. The positions will be funded from increased fees that the TCEQ may assess for processing water pollution abatement plans and other plan reviews. The measure also expands the activities that can be funded by these fees.

SB 1436
National Flood Insurance Program

In September, the National Flood Insurance Program (and two FTEs) moved to the TWDB. This puts the TWDB in the role of coordinating efforts of cities and counties to qualify for the program, and encouraging the federal government to evaluate flood-prone areas.

Waste

HB 3554
Petroleum storage tanks

The statewide reimbursement program for cleaning up leaking petroleum storage tanks (PSTs) was extended by four more years. The program had been set to close at the end of fiscal 2007. Reimbursement claims are now due by March 1, 2012. The petroleum products delivery fee was continued another four years, but at one-third of the current rate. The tank registration fee will be eliminated if the bulk delivery fee is collected. The agency must define risk-based corrective action that will be used as the cleanup standard.

The TCEQ has had oversight of this program since its creation in 1988. In all, the agency has received reports of 24,510 leaking PST sites—primarily at gasoline stations. Cleanup has been completed at 21,700 sites. Of the remaining sites, about 1,100 will need PST funding for cleanup.

HB 1956
PST financial responsibility

When submitting their annual compliance certifications, the owners or operators of PSTs must submit proof of financial responsibility. The TCEQ is authorized to shut down a PST system that fails to maintain financial assurance.

SB 1604
Radioactive substances

The TCEQ has been assigned additional oversight of activities associated with the disposal of radioactive substances. With the expanded authority, the agency received 11 positions from the Radiation Safety Licensing Branch at the Texas Department of State Health Services (DSHS). They join a newly formed TCEQ division, the Radioactive Materials Division in the Office of Permitting, Remediation, and Registration. The legislation extends the TCEQ's low-level radioactive waste disposal program to include authority over the disposal of byproduct materials, recovery of uranium, and commercial processing and treatment of radioactive substances.

The legislation also set a deadline of Oct. 1, 2007, for completing a technical review of an application that was pending at DSHS for byproduct disposal in West Texas. The TCEQ has been engaged in its own technical review of a separate application for disposal of low-level radioactive waste at an adjacent proposed facility in West Texas. A recommendation on that licensing matter is expected in October as well.

HB 2714
Computer recycling

Texas will begin requiring computer manufacturers to offer recycling of used computers—at no cost to consumers. Furthermore, retailers may only sell the computer brands for which recovery programs are available. The TCEQ will head up an education campaign informing the public about computer recycling options, which do not extend to televisions, telephones, or personal digital assistants.

Permitting

HB 3732
Energy projects

The measure creates the Advanced Clean Energy Project Grant and Loan Program to encourage development of ultraclean energy projects. The TCEQ has to establish a streamlined permitting procedure for these projects. The agency will also expand the list of equipment eligible for property tax abatements to include a number of energy-saving and emission-reducing categories. This list must be updated at least every three years.

Taking Pride in the Neighborhood

Beautification program provides essential equipment

Residents in El Paso are sprucing up the place—thanks to the easy accessibility of yard and garden tools that are no farther away than the nearest fire station.

A novel idea hatched by Keep El Paso Beautiful has grown into a citywide program that offers equipment and supplies—at no cost—to anyone wanting to plant a tree, clean up an alley, or just do basic lawn care.

By visiting a community toolshed at a local fire station, residents can borrow rakes, shovels, hoes, cultivators, brooms, push mowers, and trash bags. Borrowers must be 18 or older and show a valid ID to check out the equipment as long as five days. A firefighter records where the equipment will be used and how many volunteers will participate.

Courtesy Keep El Paso Beautiful

"We consider this to be a lending library of beautification supplies," explains Katherine Gunter Palafox, executive director of Keep El Paso Beautiful. "It empowers individuals to enhance their own homes and neighborhoods."

The El Paso Fire Department agreed to be a partner with the nonprofit because "it allows them to get to know the neighborhoods they're located in," she added.

The notion of supplying yard tools arose in 2004 while the beautification group was planning a large-scale cleanup. Afterwards, scores of newly purchased rakes, brooms, and gloves ended up in Palafox's garage. At each succeeding event, she had to haul the implements to another cleanup site.

Deciding that "this was not an efficient way for the community to get access to the supplies purchased for their use," Palafox raised funds to establish the first eight community toolsheds, which were placed at fire stations. The program proved so popular that additional grants and commercial sponsorships allowed it to expand until fully stocked toolsheds reached all 28 fire stations in the city.

"After the 2006 floods, the community toolsheds were really in demand, even by people from surrounding communities," she recalls. "The Red Cross also used our equipment."

It was during the storm recovery that Palafox realized wheelbarrows and wet/dry vacs were also necessary, and soon those pieces of equipment had been added to every toolshed.

Palafox says Keep El Paso Beautiful emphasizes not only litter prevention and beautification but also pollution prevention. In presentations to schools, health fairs, and civic groups, representatives distribute literature on the proper disposal of hazardous materials.

The lending program has been especially effective in reaching low-income residents, as well as the elderly, the disabled, and apartment dwellers. "The community has really embraced this program and taken more responsibility for the environment," she says.

Meanwhile, the number of cleanups has grown from an average of 45 a year to more than 300. The city helps by providing free debris removal at cleanups involving more than 20 volunteers.

Keep El Paso Beautiful estimates that for every community toolshed in operation, 10 tons of trash and illegally dumped debris is removed each year.

The organization estimates that buying one toolshed and the related supplies runs about $4,000.

Blueprint for Sust

The demand for healthier, more efficient buildings

Early on, being green was anything but easy.

That's what Dallas city officials learned when they undertook their first super-efficient, green building project in 1999. The project on the drawing board was a new police headquarters, which was needed to replace an overcrowded, 80-year-old facility.

Ideas started rolling in for reflective roofing material, waterless urinals, and higher wall insulation values.

A HEPA-grade filtration system was included to improve indoor air quality.

Planners even devised a way to collect and store storm water to supply all the irrigation needs on the 4-acre site, a once-contaminated industrial property near downtown.

Austin's angular city hall earned a gold LEED rating for its innovative design and energy-saving features. Most of the building materials were chosen for their high degree of recycled content. On the plaza, a large solar panel generates 9 kilowatts a day and shades seating during outdoor events.

ainability

is driving new design and construction practices

Courtesy Southern Methodist University

But one requirement—to use paints, adhesives, sealants, and carpets with low levels of volatile organic compounds—almost proved to be an impossible hurdle.

"It was difficult to locate materials that met the 'green' criteria," recalls Robert Van Buren, a senior architect with the city of Dallas. "They just weren't readily available. Over the last five or six years, however, there has been a tremendous change in the marketplace as more products have come out to meet green standards. It really has transformed the industry."

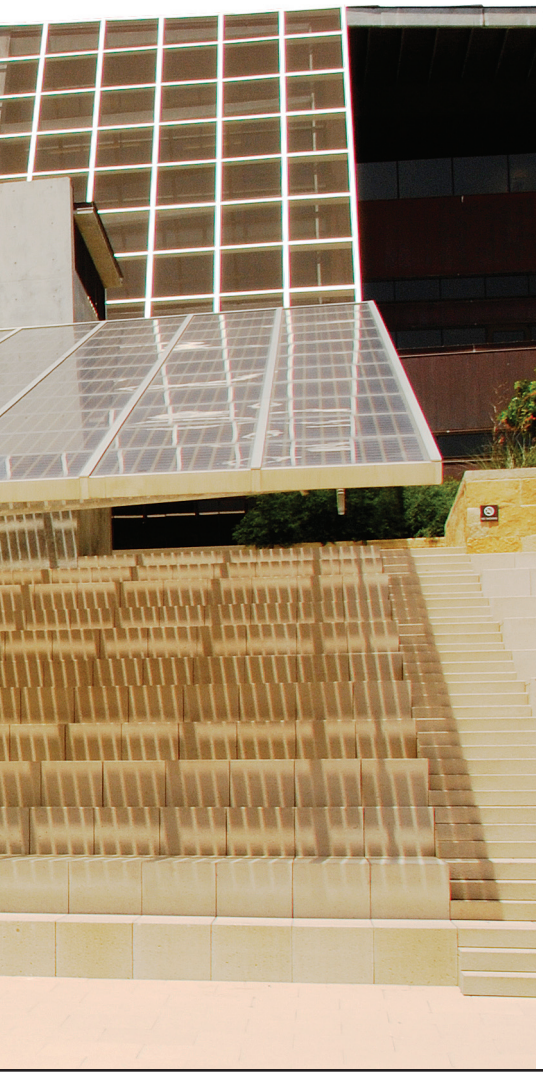


Photo by Douglas Falls, TCEQ

The Jack Evans Police Headquarters (see cover) opened in 2003 to the acclaim of the Environmental Protection Agency and advocates of minimizing the impact of commercial and government buildings on their occupants and the environment.

Not long after the six-story building was in full use, the savings began adding up. "Due to energy costs going up at a higher rate than we projected and the building operating a little more efficiently than the energy model, we are actually ahead of expectations," says Van Buren, who was the project manager.

Rather than 10 years to recoup the front-end "green" building costs, it now looks closer to 8½ years, he said, explaining that "even relatively inexpensive things like occupant sensors have helped. This allows the building to turn lights off in areas not being used. You don't have to rely on someone to remember to flip the switch."

The police headquarters became the first project in Dallas certified by the U.S. Green Building Council (USGBC), a nonprofit that promotes building and design practices that are environmentally responsible.

Other green-building rating systems exist, but the USGBC's is the most recognized and widely used.

Going Greener

Dallas has company in its pursuit of long-term savings with the green approach to municipal projects. City councils in Austin, Houston, San Antonio, and Frisco have also passed resolutions or ordinances calling for future city projects to follow green guidelines for sustainability.

In fact, public projects have been at the forefront of green building, says Van Buren. "Private developers did not see the value added in that expense. It's been a gradual change as they now see the marketing advantage."

A number of large corporations have now embraced the "healthy workplace" standard at the urging of employees, says Houston architect Tim Murray. "Some corporations will only lease space in buildings that are considered green. It's necessary for recruiting. College graduates who have been raised on the 'reuse and reclaim' mantra are actually asking recruiters where they will be working and in what sort of building."

Murray, president of USGBC's Greater Houston chapter, sees the momentum for green building accelerating. He said

continued on page 10

Leading Examples of Green Buildings

The following building projects in Texas have received a high-level LEED certification from the U.S. Green Building Council.

EMS Station No. 28, Austin

The first public building in Texas to bring home the gold LEED rating was an Emergency Medical Services station built in 2004 by the city of Austin. The 24/7 response facility houses a communications area, a truck bay, and temporary living quarters for EMS workers. Much of its energy strategy relies on an insulated concrete wall system that was built with a high proportion of recycled material and was produced near Austin. The 5,300-square-foot station has low energy bills and outstanding sound insulation. Wide porches and a rainwater collection cistern also help shave energy bills.

City Hall, Austin

Austin again boosted its environmentally friendly reputation in late 2004 by opening a new city hall that qualified for the gold-level LEED. The project used recycled construction materials, recycled its construction waste, and chose indoor products that emit low levels of volatile organic compounds (paints, carpets, adhesives). The city met the LEED urban redevelopment goal by locating its city hall amidst dense downtown development. It also got points for encouraging employees to use alternative forms of transportation—the basement includes showers and locker rooms for bicycle riders. For electricity, the building is 100 percent subscribed to renewable energy, which includes wind power. Condensation from the air conditioning system is converted into a waterfall in one of the outdoor plazas.

NASA Facility, Houston

The Johnson Space Center opened a new astronaut quarantine facility in 2005 after meeting the LEED certification requirements for sustainability. The one-story building with 12 bedrooms is where astronauts spend three days in isolation before a spaceflight. They get medical exams and adjust their sleep schedules to match the demands of the upcoming flight. After the mission, they return for rest and debriefing. The stand-alone building was built with recycled structural framing; recycled rubberized floors; high-efficient heating, ventilation, and air-conditioning systems; and energy-monitoring control systems. Landscaping includes a retention pond to minimize runoff, native vegetation, and permeable gravel driveways and grass-pave parking areas.

Awaiting Certification

The following projects were designed to qualify for some of the highest LEED standards. They are registered with, but not yet certified by, the U.S. Green Building Council.

UT Nursing School, Houston

The University of Texas nursing school in Houston responded to an acute nursing shortage by undertaking a major expansion of its program and facilities. One result is a $57 million building at the Texas Medical Center that not only brings more students and faculty to the school but sets a new design standard for campus buildings. The eight-story School of Nursing and Student Community Center opened in 2004 with 23 classrooms, the latest in audiovisual technology, and a nursing-skills laboratory with 32 beds. The building surface is made from recycled materials such as fly ash, a waste byproduct of coal-burning power plants. It includes aluminum panels made from 92 percent recycled material, wood siding made of sinker cypress from the bottom of the Mississippi River, and red bricks salvaged from a 19th century warehouse. Energy-efficiency measures include individualized temperature controls and an under-floor air distribution system. Also, water-recovery tanks and troughs on the roof and sides of the building collect rainwater, which is then used for irrigation and toilet flushing.

Southern Methodist University, Dallas

SMU's J. Lindsay Embrey Building was built with designs on obtaining

Efficiency Standards Increase

The Legislature has expanded requirements for energy savings in government functions.

Senate Bill 12 requires universities, state agencies, school districts, and local governments to devise plans to reduce electricity consumption by 5 percent a year through 2013. Except for school districts, progress reports are due annually to the State Energy Conservation Office.

The new law also requires state agencies to purchase equipment and appliances that meet the federal Energy Star standards, if the purchase is cost-effective.

the gold-level LEED. The university building, which houses the departments of mechanical engineering and environmental and civil engineering, opened in the fall of 2006. To qualify for the gold level, most of the building materials came from within 500 miles of the campus, and at least three-quarters of the construction waste was recycled, rather than being sent to a landfill. To save energy, the building features large windows and a three-story internal light column that brings daylight to interior rooms. The building also saves on monthly water bills by recycling water from the HVAC system and using waterless urinals. While the LEED certification will not be issued until later this year, SMU officials believe they have opened the state's first university building at the gold level.

Children's Hospital, Austin

The Dell Children's Medical Center of Central Texas opened in June 2007 with a bold plan—to qualify for the LEED platinum status. If it does, the $200 million medical center, with 170 beds, could be the first hospital in the world to obtain the top LEED standard. Located on 32 acres of what once was Austin's municipal airport, the complex is expected to serve as a model of a "healthy hospital." No high-VOC paints or solvents were used, nor PCBs. Open-air courtyards throughout the hospital bring natural light and a healing environment to young patients. Energy savings are achieved through the use of solar panels, heat-recovery systems, and an on-site high-efficiency power plant. The city of Austin and Austin Energy helped the Seton Family of Hospitals, the hospital owner, with the design and engineering of the power plant, which produces chilled water and steam as well as power.

Courtesy Marc Swendner Photography

The new Dell Children's Medical Center of Central Texas, at almost 500,000 square feet, has raised the bar for green building in Texas. Following strict conservation principles during design and construction, the hospital could be designated the most environmentally advanced facility in the state.

Blueprint for Sustainability *continued from page 7*

that in June 2006, there were 29 projects in Houston seeking LEED certification with the USGBC; by June 2007 there were 110. "It means they've signed up with the USGBC and announced they intend to build by these standards."

Going the Extra Mile

The rating system for LEED (Leadership in Energy and Environmental Design) was issued in 2000 by the USGBC. The innovative design. Points accrue, for example, for using building materials drawn from local sources, which reduces energy spent on transporting materials. Recycling is also rewarded when construction materials are reused on-site rather than being hauled to a landfill.

The program also encourages features that promote worker health and productivity—such as superior indoor air quality and natural lighting.

Courtesy Marc Swendner Photography

With an abundance of windows, the halls and many rooms of the Dell Children's Medical Center in Austin are bathed in natural light. Materials for the limestone and wood interior wall structures came from local and regional sources to save fuel during shipping.

more environmentally sustainable a project, the more points it earns toward its LEED ranking.

Projects are evaluated by factors such as energy and water efficiency, recycling and disposal of waste, and

Under the LEED system, projects registered with USGBC must be evaluated before they can be certified. Certified projects that go the extra mile and accrue additional points may be labeled silver, gold, and, finally, platinum.

The USGBC reports that 37 projects (new construction) have been certified in Texas. Of those, seven earned gold, but none has yet to reach the pinnacle of platinum.

That may change after this summer's opening of the Dell Children's Medical Center of Central Texas. Built on the runway of Austin's former airport, designers took advantage of that fact and reused about 47,000 tons of runway material in building the hospital. Also, 92 percent of construction waste was recycled on-site. Use of local and regional materials saved fuel on shipping.

Reclaimed water is used for irrigation, and toilets throughout the hospital have a dual-flush setting for high or low volume.

An on-site natural-gas turbine supplies all of the electricity, while links to the municipal grid and emergency generators provide backup. Converted steam energy from a heating and cooling plant supplies the chilled water. Under-floor ducts for air distribution in nonpatient areas require less fan power than ducts placed above the ceiling.

Natural light is pervasive. Five interior courtyards and lots of windows bring daylight to most offices and within 32 feet of every patient room. Much of the food served on hospital trays is grown on farms and ranches in Central Texas.

Officials with the Seton Family of Hospitals say that from an environmental standpoint there is no other hospital in the world like this one. The Austin facility is already drawing visitors from as far away as Japan and China.

The USGBC estimates it will take several months to obtain a third-party review of the project and determine whether the children's hospital merits the prestigious rating of platinum. If so, it will be the state's first.

Expedited-Enforcement Effort Grows

Field citations offer a quick resolution for certain violations

Observers of the Commission's public meetings may have noticed a new category on the enforcement docket—field citations.

These on-the-spot citations issued by TCEQ investigators are the result of a year-long pilot program designed to quickly handle certain clear-cut violations and their corrections.

The pilot showed such promise that the TCEQ has expanded the program and made it permanent. Seventeen violations are now eligible for this shortened procedure.

The use of field citations started in March 2006 after an agencywide review of the enforcement process indicated a need for quicker resolutions, when feasible.

In the first year of the pilot, 148 field citations were issued statewide, assessing $244,545 in penalties.

Jayme Sadlier, enforcement liaison and coordinator of the program, says that field citations are particularly beneficial for smaller companies, such as convenience stores. "Some recipients appreciate knowing immediately what the penalty is and how quickly they can be done with the process. Once they sign it, pay it, and complete the corrective action, their part is done."

Recipients are eligible for a 30 percent discount from the usual penalty. The commissioners must approve each citation and penalty.

A regulated entity may be offered only one field citation for each possible violation in a five-year period. Violators have 30 days to pay the fine and 45 days to correct the problem. Otherwise, the discount is withdrawn, and the case goes through the regular enforcement process.

Under standard procedures, a notice of enforcement is typically mailed 30 to 60 days from the investigation date—and that's just the beginning of the process. But with field citations, the entire process is wrapped up in 60 days or less for the recipient.

Sadlier notes that "many violations are too complicated for the field citation process, but for these 17 violations, this is a very effective tool."

Contributing to this article: Andrea Morrow

When Field Citations Can Be Used

During the TCEQ's pilot program, the majority of the field citations were issued as a result of noncompliance problems involving petroleum storage tanks (PSTs), primarily at retail gas stations.

The PST violations included failure to provide release or corrosion protection, inadequate inventory control methods, lack of spill containment or overflow prevention, missing vapor recovery equipment, and an expired or non-existent TCEQ-issued delivery certificate prior to receiving fuel.

Other violations included failure to obtain certain storm water permits or occupational licenses.

In making the program permanent, the commissioners added eight violations, including additional PST problems: lacking current registrations and certification forms, and failing to maintain financial assurance to cover the cost of cleaning up a spill.

Also added were violations in dry cleaner operations: purchasing the solvent perchloroethylene without proper registration, distributing or selling the solvent without proper registration, and failing to obtain a valid, current dry cleaner registration.

In addition, failure to obtain a construction general permit for storm water can also result in a field citation, as can unauthorized impoundment, diversion, or use of state water.

Pollution Control Strategies to Expand

Amended air quality plans now under federal review

In a Nutshell: SIP Revisions

New control measures for the counties of Harris, Galveston, Brazoria, Chambers, Fort Bend, Liberty, Montgomery, and Waller

- New and existing controls on VOC emissions from marine sources and storage tanks;
- requirements for certain marine fuels to meet the Texas Low Emission Diesel standards; and
- additional programs sponsored by local governments.

New control measures for the counties of Dallas, Tarrant, Collin, Denton, Ellis, Johnson, Kaufman, Parker, and Rockwall

- Further emission reductions from major sources of NO_X, such as cement kilns and electric generating facilities;
- reduced emissions from minor sources of NO_X, such as engines;
- additional programs sponsored by local governments; and
- emission reductions from rich-burn compressor engines in 33 East Texas counties.

Pending federal approval, the TCEQ is preparing to institute plans for deeper emission reductions in the state's two largest metropolitan areas. The nonattainment areas of Houston-Galveston-Brazoria and Dallas-Fort Worth are working to curb emissions to satisfy federal air quality standards for ozone.

Eight counties in the Houston area and nine counties in the Dallas-Fort Worth area face a deadline of June 2010 to comply with the federal ozone standard of 85 parts per billion (ppb) in any 8-hour period. Any ozone monitor measuring average levels higher than that on four or more days in a year constitutes a violation.

In May, the TCEQ adopted revisions to the State Implementation Plan, a document detailing Texas' clean-air strategies, and sent the proposals to the Environmental Protection Agency for review.

Along with the SIP submission to EPA, Gov. Rick Perry sent a request to change Houston's nonattainment classification from "moderate" to "severe" and to extend the attainment deadline. Perry proposed giving the highly urbanized area until June 2019 to demonstrate attainment.

Noting that the region has a "huge population, one of the largest and most comprehensively controlled petrochemical complexes in the world, and a subtropical climate," Perry said that Houston and its neighboring counties face a monumental task in meeting the 8-hour standard.

"Modeling indicates that not even a complete shutdown of the Houston Ship Channel industrial area would bring about sufficient reductions" for the region to attain the ozone standard in 2010, the governor wrote.

Soon after, EPA announced it might revise the standards for measuring ozone for the first time since 1997. EPA is accepting public comments until early October on setting the ozone standard within a range of 70-75 ppb. Recommendations from the states, drawn from

New Technology Could Aid Pollution Detection

The TCEQ is conducting the first study by a U.S. regulatory agency of a new monitoring technology at industrial sites.

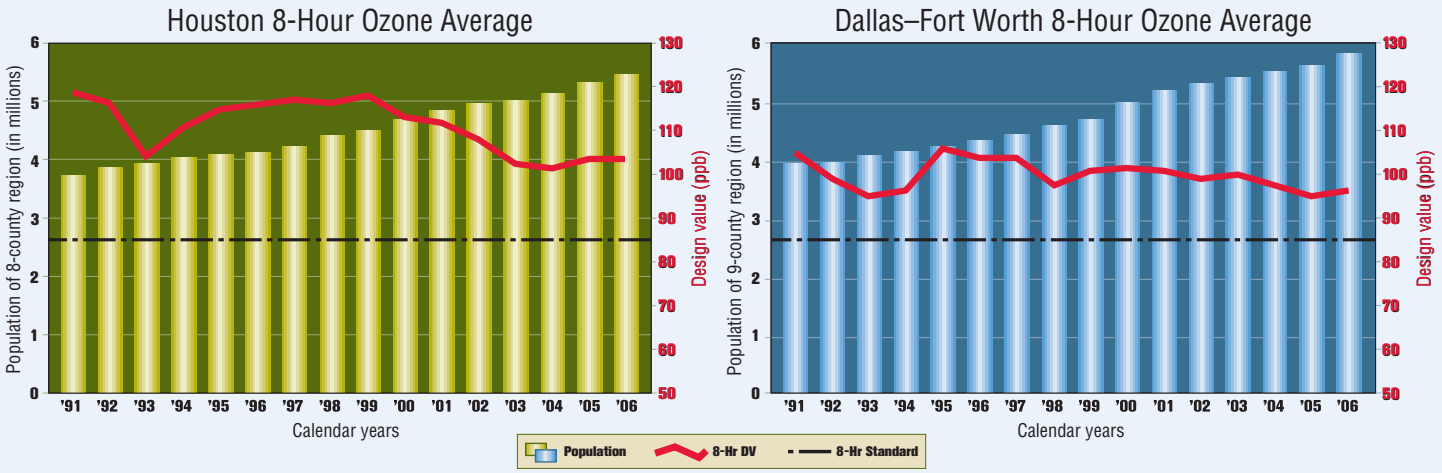
This summer, the TCEQ took temporary possession of an advanced remote sensing system that uses infrared and ultraviolet lasers to measure emissions downwind from sources of volatile organic compounds (VOCs).

The equipment, operated by a United Kingdom company, performs differential absorption lidar (DIAL) measurements on industrial emission sources. This method has been used in Europe for two decades to get readings from industrial sources that are difficult to measure with conventional sampling techniques.

The study, funded in part with a $200,000 grant from the Environmental Protection Agency, focused on VOC emission sources at cooperating industrial sites in Texas City.

DIAL measurements were conducted for five weeks during July and August. At the same time, infrared-gas imaging cameras were used in aerial and ground observations.

The purpose of the study was to measure actual emissions from difficult-to-measure sources and then compare the data to results obtained with standard methodologies. Preliminary data will be available this fall.



Note: The design value is the best measure of ozone severity. Each 8-hour DV is calculated as the average of the fourth highest 8-hour readings from each of three consecutive years of data.
Sources: EPA, TCEQ, and U.S. Census Bureau

2006-2008 monitoring data, are due to EPA in June 2009.

TCEQ officials said EPA's proposed new standard would place most mid-size to major cities in Texas in nonattainment for ozone.

Progress Continues

Looking at the big picture, TCEQ Chief Engineer David Schanbacher says Houston and Dallas-Fort Worth have made substantial progress in air quality the last 15 years—all while experiencing economic and population growth.

In fact, if EPA's 1-hour ozone standard were still in effect, Dallas-Fort Worth would have reached attainment in 2006, he says, predicting that the region will satisfy requirements for the current 8-hour standard in 2010.

As for Houston, the TCEQ is "moving forward expeditiously" with stronger regulations addressing the ozone precursors of nitrogen oxides (NO_x) and volatile organic compounds (VOCs), he says.

Schanbacher pointed out that the two urban areas have different emissions profiles and therefore require different solutions.

Ozone levels in the Dallas-Fort Worth area stem primarily from mobile sources, such as cars and trucks. With Houston, "our strategies have to be comprehensive enough to encompass not only mobile sources but also broad-based industrial activities, plus a complex situation with the meteorology in the Gulf Coast area," he says.

Under the federal Clean Air Act, mobile sources are regulated by EPA and not by states or local governments. Even so, TCEQ officials expect that both regions will benefit from the expansion of the Texas Emissions Reduction Plan, which issues grants to upgrade or replace older, higher-polluting diesel vehicles and equipment, and another state program that repairs or replaces aging gasoline vehicles (see article on new legislation, page 1).

Study Findings Under Review

Yet to be seen are the results of the Texas Air Quality Study II. Its findings are expected to become an important component in formulating future air quality plans.

The multimillion-dollar research project is being carried out by TCEQ staff along with scientists from institutions of higher education and federal and state agencies.

The goal is to better understand the role of different emission sources in the formation of ground-level ozone. The study will help document the transport, or movement, of pollutants into and within Texas. It will also produce more accurate estimates of ozone precursors, new pollutant data for all of East Texas, and improved computer models for simulating ozone pollution.

During the field study, held from mid-August to mid-September 2006, 141 sites in the eastern half of Texas reported their hourly emissions of NO_x, VOCs, and sulfur dioxide (SO_2) from predetermined industrial sources. From that, an hourly point source emissions inventory was assembled for analytical projects.

This data-collection aspect of the study targeted emission sources that are subject to state rules for highly reactive VOCs, as well as NO_x and SO_2 sources equipped with continuous emission monitors. Sources near air monitoring sites were included, too.

Researchers and TCEQ staff are continuing to analyze not only the data from the special inventory but also the data collected from special monitoring locations and aircraft missions.

Hunting for Heroes

The TCEQ is accepting applications until Oct. 19 for the 2008 Texas Environmental Excellence Awards (TEEA).

Since 1993, the agency and the Governor's office have issued the annual awards to individuals, organizations, and businesses that demonstrate initiative and embody the spirit of environmental stewardship.

In all, about 175 of these awards have gone to people and projects that benefit communities in Texas by preserving or protecting natural resources.

The TEEA program recognizes projects in the following categories: Agriculture, Civic/Nonprofit, Education, Government, Individual, Innovative Technology, Large Business–nontechnical, Large Business–technical, Small Business, and Youth.

The 2008 winners will receive their awards during the TCEQ's Environmental Trade Fair and Conference, scheduled in Austin for April 29 to May 1, 2008.

To download the applications, go to www.teea.org. The web site also features video presentations of current and past winners.

For more information, call 512-239-3143.

Training Assistance Available

The TCEQ has received a federal grant to pay for the training and licensing of operators of small public water systems. This free training applies to water systems serving 3,300 or fewer people.

At least two operators at each system are eligible to receive the benefits, which last through August 2009.

Funding for the Texas Small Public Water System Training Program is provided by a $9.6 million grant from the Environmental Protection Agency.

For more information or enrollment forms, visit www.txsmallwater.org, or call toll free, 877-822-5349.

PD-020/07-03

Take Care of Texas

www.takecareoftexas.org
Online Tips to Do Your Part!

Natural Outlook, MC 118
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, TX 78711-3087

RETURN SERVICE REQUESTED

PRESORTED
FIRST-CLASS MAIL
US POSTAGE PAID
AUSTIN, TX
PERMIT NO. 1967